

**WILKES-BARRE AREA VOCATIONAL-TECHNICAL SCHOOL
PRACTICAL NURSING PROGRAM**

CALCULATION OF DRUG DOSAGES

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**WILKES-BARRE AREA VOCATIONAL-TECHNICAL SCHOOL
PRACTICAL NURSING PROGRAM**

CALCULATION OF DRUG DOSAGES

Course Objectives:

Upon completion of this course, the student will:

1. Review the use of mathematical computations involving fractions, decimals, percentages, ratio's and proportions.
2. Discuss the use of the metric, apothecary, and household systems of measurement.
3. Identify the appropriate use of ratio-proportion in dosage calculations.
4. Describe the use of the formula method in dosage calculations.

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CALCULATION OF DRUG DOSAGES

Course Title:	Calculation Of Drug Dosages
Time Allotment:	10 Hours
Placement:	Level I
Course Overview:	This course presents the use of the metric system and basic mathematical concepts for the calculation of drug dosages.
Teaching Methods:	Lecture and discussion Demonstrations Worksheets Audio-Visual aids Handouts Computer software
Evaluation Methods:	3 Examinations : Average of grades = Final course grade The student will complete the Arnett Dosage and Calculations PN Content Examination, as scheduled.
Grading:	The student must achieve a grade of 80% or higher to pass this course. Missed quizzes or examinations will be graded per student handbook policy.

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CALCULATION OF DRUG DOSAGES

BIBLIOGRAPHY

1. Boundry, J. & Stockert, P. (2008) *Calculation and Medication Dosages*. Philadelphia: Lippincott
2. Brown, M. & Mulholland, J. (2004). *Drug Calculations* (7th Ed.) Philadelphia: Mosby.
3. Morris, D. G. (2002). *Calculate With Confidence*. (7th Ed.). Philadelphia: Mosby.
4. Ogden, S. (2003). *Calculation Of Drug Dosages*. (7th Ed.). St. Louis: Mosby.
5. Roach, S. (2003). *Introductory Clinical Pharmacology*. (7th Ed.). Philadelphia: Lippincott.

COMPUTER SOFTWARE

1. *Pro Calc*. (1998). [Computer software] Professional Software, Inc.

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COURSE OUTLINE

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HOURS	OBJECTIVES	MAJOR TOPICS	MAJOR LEARNING ACTIVITIES
1	Upon completion of this course, the student will:	I. Introduction To The Course	The student will: Complete basic math review pretest.
2	Perform mathematical computations using fractions, decimals, percentages, ratio's and proportions.	II. Review Of Mathematics	Read appropriate chapters in Boundry & Stockert text. Chapter 1 – Complete all practice problems.
3		A. Roman Numerals	
3		B. Fractions	
		C. Decimals	
		D. Percentages	
		E. Ratio's	
		F. Proportions	
4	Achieve a grade of 80% or greater.	III. Examination #1	Attend examination review.

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COURSE OUTLINE

HOURS	OBJECTIVES	MAJOR TOPICS	MAJOR LEARNING ACTIVITIES
5		IV. Units and Measurements For the Calculation Of Drug Dosages	Lecture and classroom practice.
6	Express metric measures correctly using rules of the metric system. Compute equivalents within the metric system.	A. Metric Measurements	Read Chapter 2 – Complete all practice problems.
7	State specific rules relating to apothecary and household measurements. Compute equivalents between the apothecary and metric measurement systems.	B. Apothecary Measurements C. Household Measurements D. Equivalents Between Apothecary and Metric Measurements E. Other Measurements 1. Units 2. Milliequivalents (mEq)	Lecture and classroom practice.
8	Achieve a grade of 80% or greater.	V. Examination #2	Attend examination review.

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HOURS	OBJECTIVES	MAJOR TOPICS	MAJOR LEARNING ACTIVITIES
9	Solve dosage calculations using the ratio-proportion and formula method.	VI Dosage Calculation A. Ratio-Proportion Method B. Formula Method	Lecture and classroom practice. Chapter 6,7, and 8
10	Achieve a grade of 80% or greater.	VII. Examination #3	Attend examination review.